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MIDMARK®

Installation and Operation Manual

712 Power Plastic Surgery Table

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Owner's Product Identification

(information that you'll need to provide for servicing - key information is highlighted)

Date of Purchase

Serial Number

Model Number

Name of Owner/Facility/Department

Name of Authorized Midmark Dealer

Telephone # of Authorized Midmark Dealer

Address of Authorized Midmark Dealer

Calling for Service

If you are having a problem or have a question, make sure that you have the information highlighted above available before calling your authorized dealer. If you can't resolve your question or problem with your dealer, call the following number:

1-800-Midmark (1-800-643-6275);
8:00 AM until 5:00 PM (Eastern Standard time in the U.S.);
Monday thru Friday, except for standard U.S. holidays.

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SAFETY

A primary concern of Midmark is that this equipment be operated and maintained with the safety of the users in mind. To assure safer and more reliable operation, do the following: (1) Read this manual before operating your equipment; (2) Assure that appropriate personnel understand the contents of this manual--responsibility of the purchaser; (3) Understand the instructions contained in this manual before attempting to install this equipment.

Explanation of Safety Signals

DANGER

Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

EQUIPMENT ALERT

Indicates an imminently or potentially hazardous situation, which, if not avoided, will or may result in serious, moderate, or minor equipment damage.

NOTE

Note is used to amplify an operating procedure, practice, or condition.

GENERAL INFORMATION

This manual covers complete instructions for the installation and operation of the Midmark 712 Power Plastic Surgery Table and is intended to be used by personnel involved in the installation and operation of the Midmark 712 Power Plastic Surgery Table.

Introduction to the Model 712

The Model 712 has five powered motions, a manually operated headrest, and 6 manually operated wings. The table top height is adjustable from 24 to 42 inches. The table back moves from 1 degree down to 85 degrees up. Trendelenburg ranges from +20 to -15 degrees. The foot section moves from flat to 85 degrees down. Lateral tilt moves the entire table top 17 degrees to the right or left.

The manually positioned general anesthesia headrest is movable from 30 degrees up to 45 degrees down and out and back three inches. It is easily removed or replaced with an optional Facial Procedures Headrest capable of both vertical and lateral motion.

The table top wings rotate up 20 and 40 degrees to help hold the patient in place and are removable to ease patient access. These features combine to enhance patient comfort with the ease of powered positioning and unequaled patient accessibility.

Surgery standard (3/8 inch wide x 1-1/8 inch tall) accessory rails mount a standard restraint belt, various surgical accessories, or the exclusive Midmark fully articulating armboards. Accessory Rails at the head end can extend and retract for greater versatility and accessibility.
The 712 table is controlled by a standard pendant hand control or an optional foot control. Two control input receptacles are provided (1, Figure 1 and 2, Figure 2). Any combination of hand or foot controls can be used with these receptacles. The table can be programmed to return to as many as eight user-defined positions.

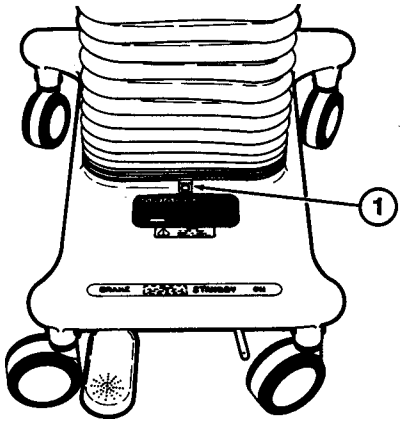

FIGURE 1: APPLIANCE INLET

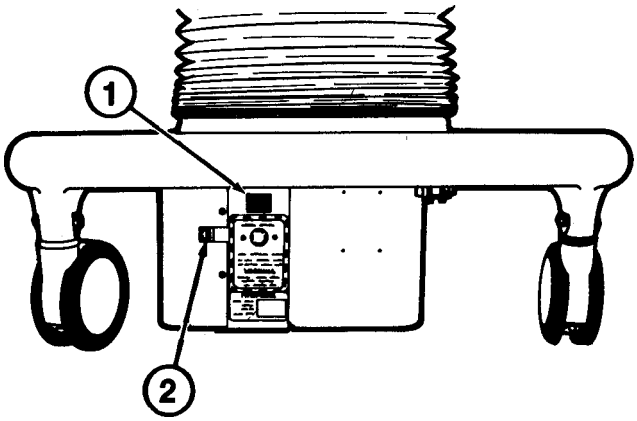

FIGURE 2: (1) CONTROL RECEPTACLE; (2) INPUT RECEPTACLE

UNPACKING AND INSTALLATION

Unpacking

Inspect the contents for shipping damage immediately. If shipping damage has occurred, do not disturb any other packaging materials before contacting the shipping company. If no damage has occurred, break the bands holding the table to the skid and remove the wooden blocks from the foot end of the skid. Roll the table off the skid, lifting from either end of the table as necessary. Plug the power cord into the appliance inlet (1, Figure 1) and the pendant hand control's coil cord into either control receptacle (1, Figure 1 or 2, Figure 2).

Open the upholstery box, packed separately, by carefully cutting only the bands. Install the upholstery (Figure 3) noting the positions of the three different wings: seat wings, 1; kidney wings, 2; and shoulder wings, 3. Be sure your installation matches Figure 3. The headrest upholstery, 4, must be attached to the headrest assembly with the four 1/4-20 x 1 inch screws (supplied). Tighten these screws so that the mounting bracket compresses the foam backing of the headrest.

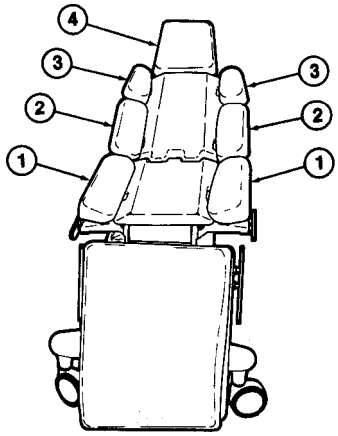

FIGURE 3: (1) SEAT WINGS; (2) KIDNEY WINGS; (3) SHOULDER WINGS; (4) HEADREST ASSEMBLY

Electrical Requirement

The electrical rating of the Model 712 is 115 VAC 60 Hz 12 A. The three-pronged grounded hospital-grade plug must be inserted into a GROUNDED, NON-ISOLATED, CORRECTLY POLARIZED 115 V 15 A hospital-grade receptacle

WARNING **EQUIPMENT ALERT**

Use of any power supply other than 115 V, 60 Hz alternating current could result in personal injury or equipment damage.

WARNING **EQUIPMENT ALERT**

Use of this table in an explosive or oxygen-enriched atmosphere could result in personal injury or equipment damage.

WARNING

All exposed metal parts of this table are electrically grounded. When performing a cauterization or similar procedure, the patient must be insulated from the metal portions of the table with nonconductive material. Failure to do so could result in electric shock or burns to the patient.

OPERATION OF TABLE

For optimum performance allow the table to reach room temperature before operating.

NOTE

The 712 is not designed for continual operation. If the unit is operated continually, thermal overload switches in the electric motors powering the table will turn off any overheated motors. If this occurs when trying to actuate a single manual function, you will hear a fast beeping from the table control computer indicating that this function is not responding to your command. Actuation of a programmed position will result in movement of those functions which are not overheated, however, you will hear the same fast beeping when the thermally protected motor(s) should have operated. Normal operation should return after a cool off period of at least 10 minutes. If normal operation does not return after 30 minutes contact an authorized service center to investigate the cause of the failure.

NOTE

The 712 Plastic Surgery Table employs a microcomputer to interpret hand or foot control commands, to store and recall programmed positions, and to prevent mechanical interferences between the table top and the base. This microcomputer emits a variety of audible signals that indicate acceptance of a command, completion of a command that movement of the table has stopped to avoid an interference, or that a malfunction has occurred. These signals are explained in detail in the operating instructions and are summarized on page 13, *Audible Signals of the 712 Plastic Surgery Table*. Should the microcomputer fail while a patient is on the table it is still possible to operate the table (see Emergency Operation).

CAUTION

If the table malfunctions, immediately remove your hand or foot from the control button. For emergency operation of the table, see "Emergency Operation" in this manual. Do not use the table again until serviced.

Patient Load Capacity

Normal patient load capacity to allow unrestricted positioning of the patient is 300 lb (136 kg). Patient loads of up to 400 lb (181 kg) can be accommodated as long as the patient is positioned symmetrically on the table top and the patient does not attempt to get on or off from either end of the table top.

WARNING

Failure to position a patient weighing from 300 to 400 lb (136 to 181 kg.) symmetrically on the table top or failure to prevent such a patient from getting on or off at either end of the table top could result in personal injury.

Main Power Switch

The main power switch located at the head end of the table base (1, Figure 4) controls power to the microcomputer and to the electric positioning motors. The main power switch is foot activated and its status is indicated by the ON/STANDBY label above the lever and by the amber STANDBY (2, Figure 4) and green ON (3) pilot lights. In STANDBY, no power is supplied to the table control computer or to the power circuits and thus no operation is possible. Switching the table to ON supplies power to the table control computer and table operation is possible through either the hand or foot control. Switching the main power switch to STANDBY is recommended if the table is not being used or after a patient has been positioned for a procedure to ensure that no inadvertent movement can occur.

CAUTION

Switch the main power switch to STANDBY after positioning the patient to ensure that no inadvertent movement can occur.

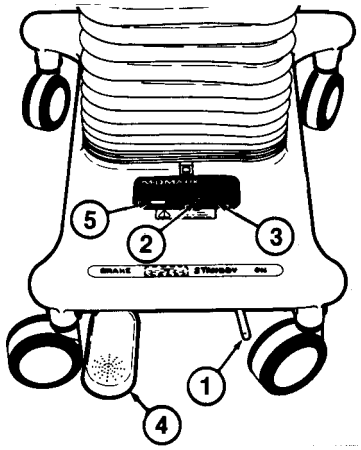

FIGURE 4: (1) TABLE BASE; (2) STANDBY LIGHT (AMBER); (3) ON LIGHT (GREEN); (4) CASTER CONTROL PEDAL; (5) PENDANT HAND CONTROL

Central Locking Casters

CAUTION

Keep the casters locked whenever a patient is on the table unless a surgical procedure requires table repositioning.

WARNING

This table is not intended for patient transport. Transporting a patient on this table could result in personal injury.

The 712 is equipped with 5 inch centrally locking casters. The caster control pedal (4, Figure 4) is shown in the horizontal unlocked position. To lock the casters from wheel rotation and swivel, depress the pedal with your foot. The casters should be locked whenever a patient is on the table unless it is necessary to relocate the table and patient to facilitate a procedure. To unlock, lift the pedal with your foot. Do not transport patients on the table. It is not intended for patient transport.

Pendant Hand Control and Optional Foot Control

EQUIPMENT ALERT

Although both the pendant hand control and the foot control are moisture resistant and not a shock hazard because they operate with low direct current voltages immersion in or contact with fluids may temporarily or permanently damage the controls

The pendant hand control (Figure 5) and foot control (Figure 6) enable and operate the powered functions to program and recall eight table positions.
Notice the color codes on the hand and foot controls. Orange surrounds the single function buttons (1 through 10, Figures 5 and 6); green denotes the ENABLE button (11); blue indicates programmed position buttons (12); and bright yellow highlights the PROGRAM button (13).

Enable Button

To begin operation of the table, press the green ENABLE button (11, Figures 5 and 6). You should hear a single *beep* and see the green ENABLE light (3, Figure 4). You now have 5 seconds to initiate movement of a function or to recall a programmed position before the table control computer must again be enabled. ENABLE provides protection from inadvertent table movements caused by accidental hand or foot control actuation. It unlocks the single function buttons (1 through 10, Figures 5 and 6) and programmed position buttons (12). Activation of any of these single or programmed position buttons resets the time-out period of ENABLE. Thus, many successive functions can be moved without pressing ENABLE more than once.

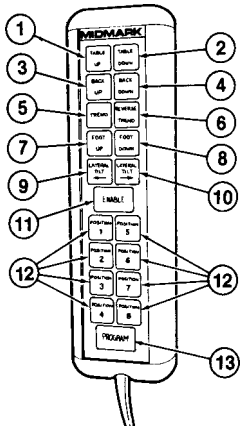

FIGURE 5: (1) TABLE UP; (2) TABLE DOWN; (3) BACK UP; (4) BACK DOWN; (5) TRENDELENBURG; (6) REVERSE TRENDELENBURG; (7) FOOT UP; (8) FOOT DOWN; (9) LATERAL TILT LEFT; (10) LATERAL TILT RIGHT; (11) ENABLE; (12) PROGRAMMED POSITION BUTTONS; (12) PROGRAM

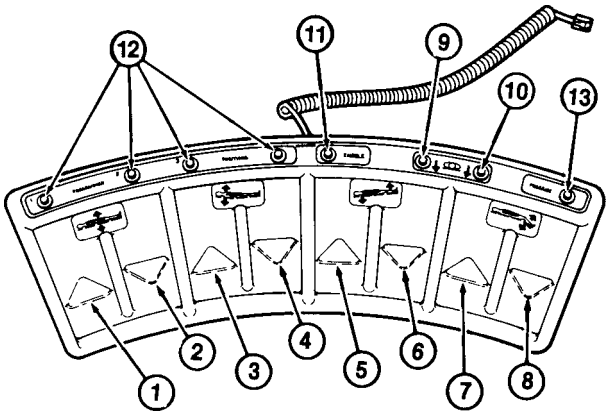

FIGURE 6: (1) TABLE UP; (2) TABLE DOWN; (3) BACK UP; (4) BACK DOWN; (5) TRENDELENBURG; (6) REVERSE TRENDELENBURG; (7) FOOT UP; (8) FOOT DOWN; (9) LATERAL TILT LEFT; (10) LATERAL TILT RIGHT; (11) ENABLE; (12) PROGRAMMED POSITION BUTTONS; (12) PROGRAM

Patient Positioning: Single Function

Operation

NOTE

All single functions may be controlled by either the pendant hand control or the optional foot control. If the table is equipped with dual controls or more than one button is depressed at the same time, the table control computer will accept only the first command and lock out all others until that button is released.

WARNING

If the table malfunctions, immediately remove your hand or foot from the control button. For emergency operation of the table, see "Emergency Operation." Do not use the table again until serviced.

Table Height Adjustment

Table Height - Raising

ENABLE the pendant hand control or the foot control by depressing the ENABLE button (11, Figures 5 and 6). To raise the table, depress and hold TABLE UP (1, Figures 5 and 6). Table movement will continue until the button is released or maximum height has been achieved. Upon reaching maximum height, the table control computer will automatically stop the motor raising the table. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred.

Table Height - Lowering

To lower the table, depress and hold TABLE DOWN (2, Figures 5 and 6). Table movement will continue until the button is released, minimum height has been achieved, or the table control computer determines that a collision of the table top and the base is imminent. Upon reaching minimum height, the table control computer will automatically stop the motor lowering the table. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred.

Table Up/Table Down - Collision Protection

The table control computer indicates collision protection by a *chirping* sound and by disallowing further TABLE DOWN movement and possibly BACK DOWN, TRENDELENBURG, REVERSE TRENDELENBURG, or FOOT DOWN movement. Figures 7 and 8 show the table in the two typical collision-protected positions. In Figure 7, the table control computer protects the foot section from colliding with the base. In Figure 8, damage to the back motor is prevented. If further TABLE DOWN movement is required, move, if feasible REVERSE TRENDELENBURG or FOOT UP if the table is positioned similar to Figure 7 and TRENDELENBURG or BACK UP if similar to Figure 8. To make the table go to its extreme low height the entire table top must be close to flat.

WARNING **EQUIPMENT ALERT**

Keep personnel and equipment clear of the table before actuating any power movement. Otherwise personal injury or equipment damage could result.

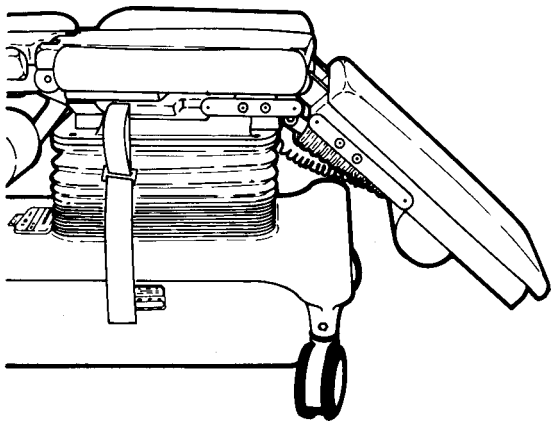

FIGURE 7

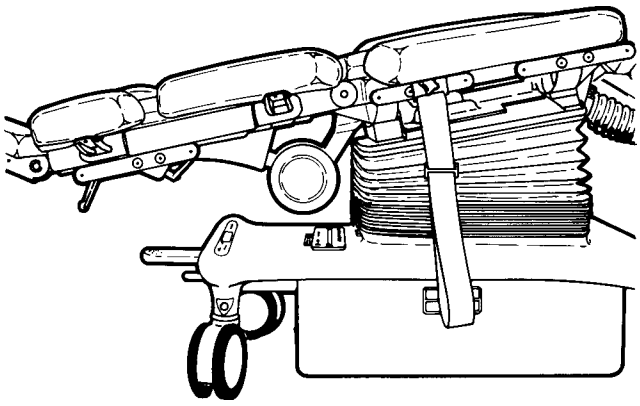

FIGURE 8

Back Section Adjustment

Back Section - Raising

ENABLE the pendant hand control or the foot control by depressing the ENABLE button (11, Figures 5 and 6). To raise the back section, depress and hold BACK UP (3, Figures 5 and 6). Back movement will continue until the button is released or chair position is achieved. Upon reaching chair position, the table control computer will automatically stop the motor raising the back section. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred.

Back Section - Lowering

To lower the back section, depress and hold BACK DOWN (4, Figures 5 and 6). Back movement will continue until the button is released a flat position is achieved or the table control computer determines that a collision of the back motor and the base is imminent. Upon reaching a flat position, the table control computer will automatically stop the movement. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating no movement has occurred.

Back Section - Collision Protection

The table control computer indicates collision protection by a *chirping* sound and by disallowing further BACK DOWN movement and possibly TABLE DOWN and TRENDELENBURG. Figure 8 shows the table in a typical collision-protected position as a result of BACK DOWN preventing damage to the back motor. If further BACK DOWN movement is required it will be necessary to move (if feasible) REVERSE TRENDELENBURG or TABLE UP. To make the back section go to a flat position when the table is low, the entire table top must be close to horizontal

Trendelenburg Adjustment

Trendelenburg - Positioning

ENABLE the pendant hand control or the foot control by depressing the ENABLE button (11, Figures 5 and 6). To achieve Trendelenburg, depress and hold TRENDELENBURG (5, Figures 5 and 6). Trendelenburg movement will continue until the button is released, maximum Trendelenburg is achieved, or the table control computer determines that a collision of the back section motor and the base is imminent. Upon reaching maximum Trendelenburg, the table control computer will automatically stop the motor powering Trendelenburg. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred.

Trendelenburg - Collision Protection

The table control computer indicates collision protection by a *chirping* sound and by disallowing further TRENDELENBURG movement and possibly TABLE DOWN and BACK DOWN. Figure 8 shows the table in a typical collision-protected position resulting from TRENDELENBURG--preventing damage to the back motor. If further TRENDELENBURG is required, move, if feasible, TABLE UP or BACK UP. To make the table go to its extreme Trendelenburg, the table top must be raised approximately half way.

Reverse Trendelenburg

To achieve reverse trendelenburg, depress and hold REVERSE TRENDELENBURG (6, Figures 5 and 6). Reverse trendelenburg movement will continue until the button is released, maximum reverse trendelenburg is achieved, or the table control computer determines that a collision of the foot section and the base is imminent. Upon reaching maximum reverse trendelenburg, the table control computer will automatically stop the motor powering reverse trendelenburg. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred.

Reverse Trendelenburg - Collision Protection

The table control computer indicates collision protection by a *chirping* sound and by disallowing further REVERSE TRENDELENBURG movement and possibly TABLE DOWN and FOOT DOWN. Figure 7 shows the table in a typical collision-protected position resulting from REVERSE TRENDELENBURG protecting the foot section from colliding with the base. If further REVERSE TRENDELENBURG is required, move, if feasible, TRENDELENBURG or FOOT UP. To make the table go to its extreme Reverse Trendelenburg, the table top must be raised approximately half way.

Foot Section Adjustment

Foot Section - Raising

ENABLE the pendant hand control or the foot control by depressing the ENABLE button (11, Figures 5 and 6). To raise the foot section toward horizontal depress and hold FOOT UP (7, Figures 5 and 6). Foot section movement will continue until the button is released or the foot section becomes parallel to the seat. Upon becoming parallel to the seat, the table control computer will automatically stop the motor raising the foot section. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred.

Foot Section - Lowering

To lower the foot section, depress and hold FOOT DOWN (8, Figures 5 and 6). Foot section movement will continue until the button is released, the foot section becomes approximately perpendicular to the seat, or the table control computer determines that a collision of the foot section and the base is imminent. Upon becoming approximately perpendicular to the seat, the table control computer will automatically stop the motor powering the foot section. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred.

Foot Section - Collision Protection

The table control computer indicates collision protection by a *chirping* sound and by disallowing further FOOT DOWN movement and possibly REVERSE TRENDELENBURG and TABLE DOWN. Figure 7 shows the table in a typical collision-protected position as a result of FOOT DOWN protecting the foot section from colliding with the base. If further FOOT DOWN movement is required, move, if feasible, TRENDELENBURG or TABLE UP. To lower the foot section all the way the table top must be raised to approximately three-fourths of its travel or Trendelenburg must be in its extreme position.

Lateral Tilt Adjustment

CAUTION

To avoid personal injury when operating lateral tilt, be aware of and keep limbs and fingers away from the pinch point between the seat and the lateral tilt cover shown as 1 in Figure 9.

Lateral Tilt - Left

ENABLE the pendant hand control or the foot control by depressing the ENABLE button (11, Figures 5 and 6). To tilt the table top's left-hand side (looking from the head end) down, depress and hold LATERAL TILT (ARROW LEFT) (9, Figures 5 and 6). Table top movement will continue until the button is released or until maximum lateral tilt left is reached. Upon reaching maximum lateral tilt left, the motor powering lateral tilt will stop. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating no movement has occurred.

Lateral Tilt - Right

To tilt the table top's right-hand side (looking from the head end) down, depress and hold LATERAL TILT (ARROW RIGHT) (10, Figures 5 and 6). Table top movement will continue until the button is released or until maximum lateral tilt right is reached. Upon reaching maximum lateral tilt, the motor powering lateral tilt will stop. Depressing the button again will result in a brief motor run and then a fast *beeping* from the table control computer indicating that no movement has occurred

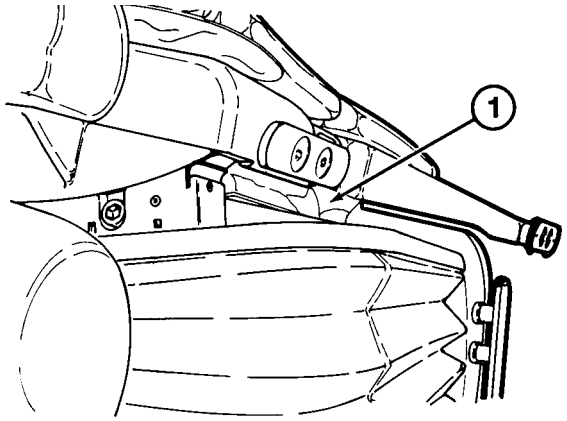

FIGURE 9: (1) PINCH POINT

Patient Positioning: Programmable Control

The 712 can be programmed to store up to eight user-defined positions. Once a position is placed in memory and the control is enabled, only one button must be pushed to simultaneously operate the five powered motions of the table. This allows quick positioning for frequently performed procedures

Programming

To store a table position in the computer's memory, the following steps must be taken.

1. Use either the pendant hand control (Figure 5) or the optional foot control (Figure 6), to position the table to the position to be placed in the computer's memory
2. Depress the yellow PROGRAM button (13, Figures 5 and 6) on either the pendant hand control or the foot control and hold for two seconds. A slow *beeping* will begin, indicating that the table control computer will now accept a position into memory
3. Depress the desired blue PROGRAMMED POSITION button (12, Figures 5 and 6). After the slow *beeping* stops, this PROGRAMMED POSITION number on either the pendant hand control or the foot control will return the table to the current position. Although the hand control allows eight positions to be stored and recalled the foot control allows only four; thus, positions 5 through 8 are only accessible with the hand control

Repeat "Programming the Table" as often as desired. Remember, however, that reprogramming a position number replaces the previously programmed position. If reprogramming is initiated, the slow *beeping* begins. If no program change is wanted, wait ten seconds and the *beeping* will stop. This indicates that the ability to reprogram has timed out and the table control computer will retain its current programmed positions.

A vinyl sheet with labels depicting different table positions has been included in the hand control's shipping carton. These labels can be placed over the numbers on the PROGRAMMED POSITION buttons (12, Figure 5) of the hand control for easy identification of programmed positions.

Emergency Operation

The 712 may be operated in Emergency Manual Override mode should a problem occur with the electronic table control computer or table calibration is required. This should only be attempted if a patient must be removed from the table or during servicing by qualified service personnel. No anticollision control operation control enabling or programmed positioning is in effect when in this mode and the operator is solely responsible for the safety of the patient.

WARNING **EQUIPMENT ALERT**

When operating the table in "Emergency Manual Override" mode, the table's anticollision control is inoperable. Be certain that the table does not mechanically interfere; otherwise, personal injury or equipment damage could result.

To attempt Emergency Manual Override, depress and hold the Manual Override button (1, Figure 10) with your foot and depress the desired control button on the hand or foot control as you would in normal operation. Release of the Manual Override button (1, Figure 10) will take the table out of Emergency Manual Override and operation of the table should cease.

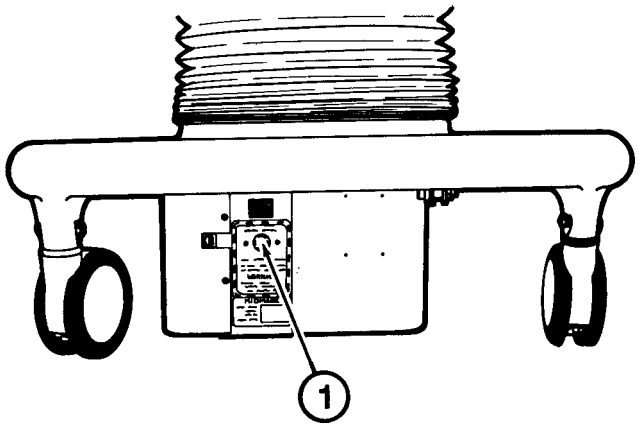

FIGURE 10: (1) MANUAL OVERRIDE BUTTON

TABLE CALIBRATION

Calibration of the table may necessary when all table movements are possible utilizing the Manual Override button (1, Figure 10), but the table prevents most TABLE DOWN, BACK DOWN, TILT UP or DOWN, and FOOT DOWN commands and a continuous chirping (refer to page 13, List of Audible Signals) sound is heard indicating collision protection has been activated.

WARNING **EQUIPMENT ALERT**

During table calibration, the table will cycle through its ranges of motion automatically. Be sure to keep yourself, others, and objects clear of the table while it is cycling. Otherwise, personal injury or equipment damage could result.

To begin table calibration switch the table power to STANDBY. Hold down PROGRAM button and switch the table power to ON. Continue holding down PROGRAM for 5 seconds after which a short beep will sound. Release PROGRAM and press ENABLE within 5 seconds. A beep will signal calibration mode has been entered. Now press and continue to hold down PROGRAM. The table should begin to operate automatically with each function fully cycling through its range of motion. A beep (similar to construction equipment) will sound while the table is calibrating to alert you and others to stand clear of the motion. **To stop** the automatic table movements, release the PROGRAM button (See following Note). At the end of the calibration, a faster beeping will sound to indicate the calibration routine is complete. The PROGRAM button may now be released and normal operation should return. If normal operation does not return after table calibration, contact an authorized service center to investigate the problem and repair the table.

NOTE

If PROGRAM is released, the calibration routine will pause and all table movement will stop. Calibration will resume if PROGRAM is again held down within 5 seconds. After 5 seconds, the calibration routine will be aborted and must be started from the beginning.

TABLE FEATURES

Patient Positioning: Hand Operated

Adjustment and Removal of Wings

The 712 has been designed with seat kidney and shoulder wings (1, 2, 3, Figure 3) to facilitate patient comfort and security while offering unequaled patient access. They rotate from flat to 20 degrees up and 40 degrees up to support and cradle the patient. The seat wings (1, Figure 3) can also be rotated down 15 degrees to ease patient access. All six wings are designed to be self-locking under a downward load but are easily removable for patient access and cleaning.

To rotate up, simply push up (as shown in Figure 11). When you hear and feel the *click* of the ratchet pawl, let the wing down against the pawl.

To rotate down, grasp the release lever (1, Figure 12) and push the wing up slightly allowing the release lever to disengage. Lower the wing and let go of the release lever allowing the ratchet pawl to reengage supporting the wing. When rotating the seat wing to its 15 degrees down position, the ratchet pawl will not reengage but the seat wing will be supported by the seat itself.

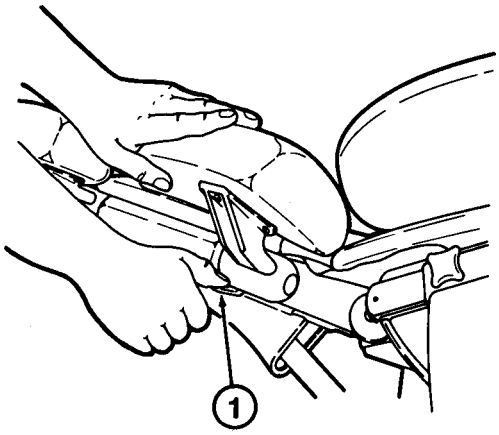

FIGURE 12: (1) RELEASE LEVER

WARNING

Removal of all wings from the seal and back will place the patient in danger of falling off the table. Failure to keep both seat wings (1, Figure 3) or both kidney wings (2, Figure 3) installed at all times could result in personal injury.

Wing removal is possible from any position. Grasp the wing as shown in Figure 13 and lift up to release the hook on the end of the wing stem (1, Figure 13). Pull out at the same time. To reinsert, simply align and push in until the stop (2, Figure 13) strikes the knob (3, Figure 13).

It is important to remove only the wings required by the surgeon for patient access. Removing all of the wings will place the patient in danger of falling off the table and will probably make the patient very uncomfortable. For example, if the seat wings (1, Figure 3) have been removed, the kidney wings (2, Figure 3) must be installed to ensure patient safety. Failure to rotate the wings up to produce a cradling effect will reduce the stability and immobility of the patient but should not place the patient in danger.

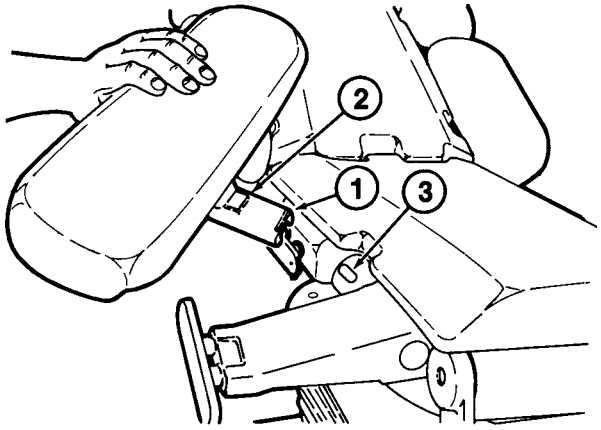

FIGURE 13: (1) WING STEM; (2) STOP; (3) KNOB

WARNING

Removal of all wings from the seal and back will place the patient in danger of falling off the table. Failure to keep both seat wings (1, Figure 3) or both kidney wings (2, Figure 3) installed at all times could result in personal injury.

Patient Restraint Belts

WARNING

Failure to keep the restraint straps securely tightened across the patient's upper thighs at all times could result in personal injury.

Patient restraint belts have been provided for patient safety. All patients must be restrained for proper safety regardless of the length of the procedure. Adjusting the restraint belts along the accessory rails so that they cross the upper thighs of the patient is recommended. To adjust the belt clamp (1, Figure 14), turn the knob (2, Figure 14) counterclockwise a full turn. Slide the belt clamp along the inner accessory rail (3, Figure 14) to the desired position. Secure the clamp by turning the knob clockwise until it is tight against the accessory rail. Position the clamp on the opposite side in a similar position. On taller patients, it may be necessary to move the restraint belt to the outer accessory rail (4, Figure 14). To do this, slip the clamp off the inner accessory rail and onto the outer accessory rail. Secure the patient by laying the belts (5, Figure 14) over the patient's upper thighs, remove any slack, and press the Velcro together. Certain procedures may not allow restraint of the patient across the upper thighs. To assure patient safety, additional sets of patient restraint belts may be necessary and are available as an option.

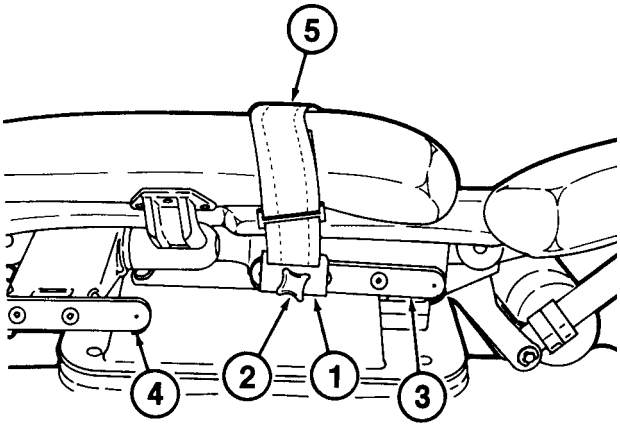

FIGURE 14: (1) BELT CLAMP; (2) KNOB; (3) INNER ACCESSORY RAIL; (4) OUTER ACCESSORY RAIL; (5) BELTS

WARNING

Failure to keep the restraint straps securely tightened across the patient's upper thighs at all times could result in personal injury.

Accessory Rails

Surgery standard accessory rails (3/8 inch wide x 1 1/8 inch tall) have been provided to allow use of many common surgery attachments. The rail system consists of four separate rails: rails 1, 2, and 3, (Figure 15) are fixed to the side of the table; rail 4 (Figure 15) moves in and out, may be easily removed, and is reversible.

To reposition rail 4, turn the lever (5, Figure 15) counter-clockwise approximately one turn to allow the rail to slide. Position as desired and turn the lever clockwise until tight. Check the rail for tightness by shaking it. It should not feel loose--if so, retighten. To remove rail 4, turn the lever counterclockwise a total of three to four turns and pull the rail extension out of its mounting tube. To reinsert, rotate the rail to the desired orientation, align, reinsert, and tighten the lever.

Rails 1 and 4 are equipped with end stop mechanisms to assure that accessories will not slide off the rails when the back section or the foot section is in an extremely angled position with respect to the ground. To place an accessory on the rail simply slide it onto the rail. To remove an accessory from the rail, slide the stop up or down until recessed in the rail and slide the accessory off.

WARNING **EQUIPMENT ALERT**

Check the rail extension for proper tightness after adjustment. Looseness in the accessory rail could result in personal injury or equipment damage.

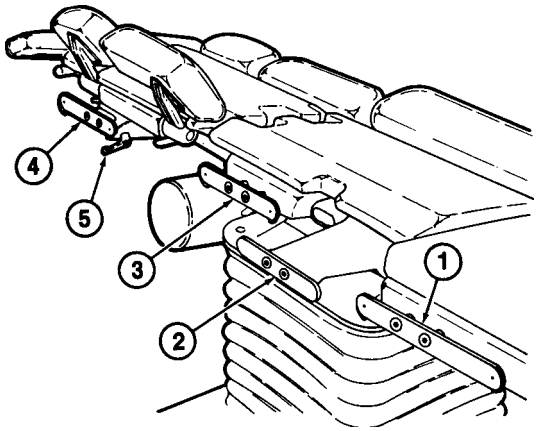

FIGURE 15: (1, 2, 3, AND 4) RAILS; (5) LEVER

General Anesthesia Headrest

The 712 is equipped with a surgery table style headrest to aid the anesthesiologist when general anesthesia is administered on the table. It tilts up 30 degrees and down 45 degrees and is easily controlled with one hand to facilitate incubation. The headrest will also extend three inches out to accommodate various patient sizes and is easily removed for hair transplants and other procedures in which it is unneeded.

Adjusting

To adjust the general anesthesia headrest to the patient's height, turn the lever (1, Figure 16) counterclockwise approximately one turn, allowing the headrest assembly to slide in and out--but not to come completely out. Position the headrest as desired and tighten the lever by turning it clockwise. To change the angle of the headrest, grasp the headrest as shown in Figure 16. To rotate up, simply push up on the headrest. To rotate down, release by pulling the knob (2, Figure 16), move as desired, and release the knob to let it lock in position.

Removing

To remove the headrest, turn the lever (1, Figure 16) counterclockwise approximately three to four turns. Grasp the headrest by the knob (2, Figure 16) and pull out the headrest.

Reinstalling

To reinstall, align positions desired and turn the lever clockwise to secure the headrest assembly.

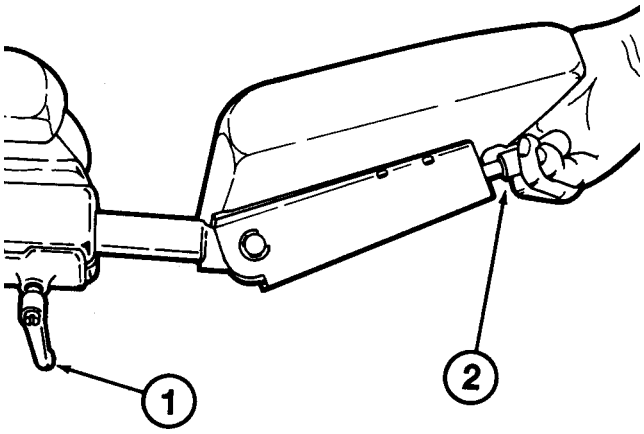

FIGURE 16: (1) LEVER; (2) KNOB

Facial Procedures Headrest (optional)

CAUTION

Failure to support the patient's head when repositioning the Facial Procedures Headrest could result in patient injury.

The 712 can be equipped with an optional Facial Procedures Headrest as shown in Figure 17. This headrest is designed to facilitate procedures around the head of the patient. Its double ball-jointed design allows the head to be positioned according to the surgeon's needs. Rigid locking is accomplished with an easy turning motion. The facial procedures headrest attaches in the same socket as the standard General Anesthesia Headrest and shares the same three inch in/out adjustability.

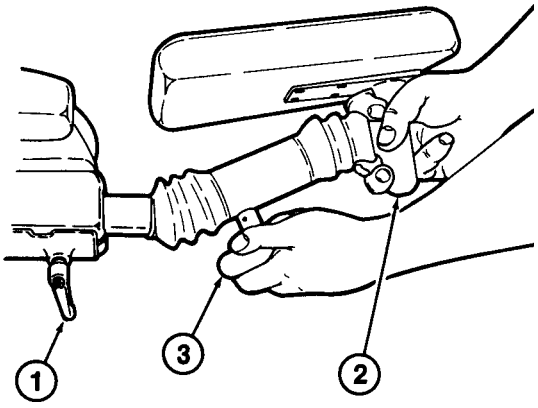

FIGURE 17: (1) LEVER; (2) HEADREST HANDLE; (3) KNOB

Installation of the Facial Procedures Headrest is the same as the General Anesthesia Headrest detailed previously. Remember to tighten the lever (1, Figure 17) to secure the headrest from movement in and out. Positioning in and out is accomplished in the same manner as the standard headrest, grasping the headrest handle (2, Figure 17) and loosening and tightening with the lever.

Positioning of the Facial Procedures Headrest must be done with two hands to avoid jerking the patient's neck and causing injury. To position the headrest, grasp the headrest handle (2, Figure 17) as shown. Grasp the knob (3, Figure 17) and slowly unlock the headlock by turning the knob counterclockwise until you can move the headrest--supporting the patient's head position as desired. To prevent the headlock from moving, lock it by turning the knob clockwise approximately 1/2 to 3/4 of a turn.

CARE OF THE TABLE

The 712 is designed to ease cleaning and infection control. The upholstery is completely free of seams resistant to most common cleaners disinfectants and medicinal-type stains and will not soak up contaminants even if cut or punctured. It is completely removable to facilitate cleaning both the upholstery and the table. The table top is constructed of one-piece castings coated with smooth epoxy powder and sealed hinges so that contaminants and cleaners can't hide in tight crevices or on rough surfaces. Areas in which liquids can pool or debris can build up have been minimized.

Clean the table daily with a disinfectant soap or spray to remove liquids or debris. Periodic application of common furniture spray wax will help to maintain the finished luster of the paint. It will also enhance the appearance of blackened components and help lubricate them as well.

Care of Upholstery

The upholstery should be completely removed and cleaned with disinfectant soap or spray daily. Use of harsher cleaners may result in discoloration or other damage to the upholstery. If harsher cleaners are desired, test for discoloration or other damage on a small hidden area.

The upholstery is resistant to many chemicals, however, the chance of staining the upholstery is reduced if fluids spilled on the upholstery are removed as soon as possible. If staining occurs attempt removal with soap and water. If this fails attempt to remove the stain with isopropyl alcohol.

Maintenance

Little routine maintenance is required other than a periodic inspection of electrical cords to make sure they are free of cuts or damage and clear of moving parts. Due to the mechanical and electrical nature of this equipment, periodic inspections at six month intervals by qualified service personnel are recommended

WARNING **EQUIPMENT ALERT**

Failure to perform periodic inspections could result in personal injury or equipment damage.

AUDIBLE SIGNALS OF THE 712 PLASTIC SURGERY TABLE

Single Beep

Either a programmed position (1-8) has been reached or the hand or foot control has been enabled.

Slow Beep (five seconds maximum)

Begins as a result of holding the yellow PROGRAM button for 2 seconds. This allows the table's computer to store the table's position as a programmed position. If a blue PROGRAMMED POSITION (1-8) button is depressed, the previously stored position will be lost.

Intermittent Beep (1 second on, 4 off)

Voltage power to table is below 95 V.

Fast Beep

Indicates slow or no motion of function(s). This may occur during single function or programmed position (1-8) operation.

One Second Fast Beep

Indicates no motion of a function. This occurs when attempting to operate a single function at its end of movement or when the function will not start due to overload or malfunction.

One Second Buzz

No power to table.

Continuous Tone

Table control computer malfunction. Reset by turning the power off for 20 seconds and then on again. If the tone persists, SERVICE IS NEEDED. If EMERGENCY operation is necessary to complete a procedure or to remove a patient before taking the table OUT OF SERVICE, see Emergency Operation in this manual. Remember ANTICOLLISION WON'T BE IN EFFECT.

Continuous Chirping

Table control computer has stopped or won't begin moving the table to prevent a mechanical collision. To continue movement of the table to the desired position, move TABLE UP approximately 6 inches, position the table top as desired, and move TABLE DOWN until the table control computer stops the table or the desired table position is attained. Some positions are not attainable. Some positions may require moving BACK UP, FOOT UP, TREND, or REVERSE TREND to allow further movement of a desired function

One Second Fast Chirping

Occurs when pressing blue PROGRAMMED POSITION button (1-8) or yellow PROGRAM button indicating that programmed positioning is not functional. Also occurs when pressing a blue PROGRAMMED POSITION button that has not been programmed.

LIMITED WARRANTY

SCOPE OF WARRANTY

Midmark Corporation (“Midmark”) warrants to the original purchaser its new Surgical products and components (except for components not warranted under “Exclusions”) manufactured by Midmark to be free from defects in material and workmanship under normal use and service. Midmark’s obligation under this warranty is limited to the repair or replacement, at Midmark’s option, of the parts or the products the defects of which are reported to Midmark within the applicable warranty period and which, upon examination by Midmark, prove to be defective.

APPLICABLE WARRANTY PERIOD

The applicable warranty period, measured from the date of delivery to the original user, shall be one (1) year for all warranted products and components.

EXCLUSIONS

This warranty does not cover and Midmark shall not be liable for the following: (1) repairs and replacements because of misuse, abuse, negligence, alteration, accident, freight damage, or tampering; (2) products which are not installed, used, and properly cleaned as required in the Midmark “Installation” and or “Installation / Operation Manual for this applicable product. (3) products considered to be of a consumable nature; (4) accessories or parts not manufactured by Midmark; (5) charges by anyone for adjustments, repairs, replacement parts, installation, or other work performed upon or in connection with such products which is not expressly authorized in writing in advance by Midmark.

EXCLUSIVE REMEDY

Midmark’s only obligation under this warranty is the repair or replacement of defective parts. Midmark shall not be liable for any direct, special, indirect, incidental, exemplary, or consequential damages or delay, including, but not limited to, damages for loss of profits or loss of use.

NO AUTHORIZATION

No person or firm is authorized to create for Midmark any other obligation or liability in connection with the products.

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